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PROTALARIDRIS genus nov.

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Pilot Register of Zoology
Card No. 36
Issued 31 March, 1980.

Insecta: Hymenoptera: Formicidae:
Myrmicinae: Basicerotini

DIAGNOSIS (worker and dealate queen): general characters as in Rhopalothrix and Talaridris, but with the following differences:

(1) Antennae 9-merous; segments III-VII short and transverse.

(2) Mandibles long, slender, their insertions remote, but the shafts converging to cross at apices when closure is complete, each tapering toward an acute, incurved, straight apical spine. As seen from the side, shafts curved markedly dorsad from base toward apex away from main axis of cranium, much as in Talaridris. Inner margins of mandibular shafts each armed with 2 long, spaced, slender teeth and 3 smaller teeth or denticles in addition to apical spine.

Male, larva, wing venation unknown.

TYPE SPECIES: Protalaridris armata sp. nov., Pilot Register of Zoology, Card No. 37. Monobasic.

DISTRIBUTION: Pacific slope of Andes in Ecuador and Colombia, in wet forest.

AFFINITIES: Close to Rhopalothrix, and especially to Talaridris, both of which have antennae 7-merous. In Talaridris, mandibles are also upcurved, but are short compared to Protalaridris armata, and the shorter and longer teeth are concentrated in a small area near to the apex, though they still appear to be homologous with the more widely-spaced teeth of Protalaridris.

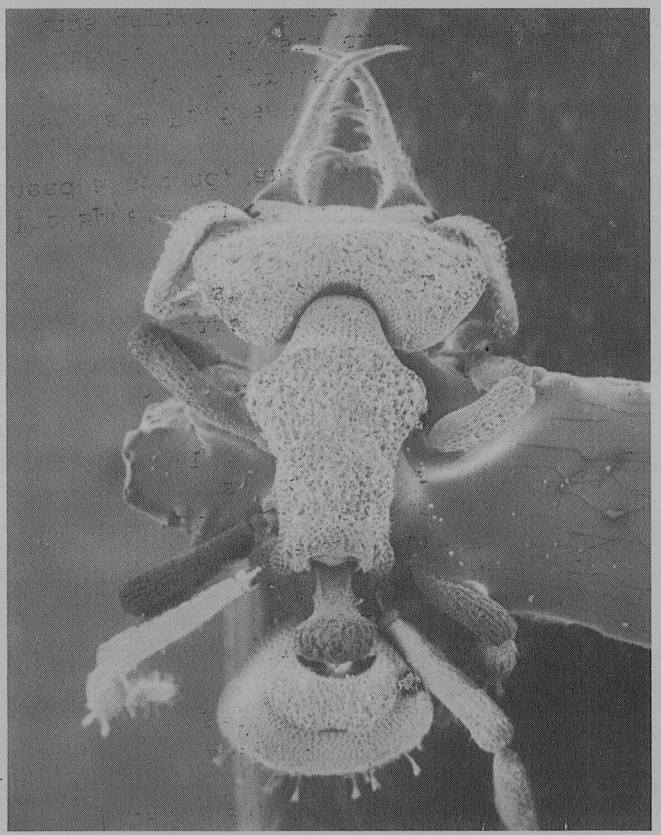

Fig. 1, Protalaridris armata sp. n., paratype worker from Pichincha Prov., Ecuador, dorsal view. SEM photograph by Norman F. Johnson.

A report of research from the Cornell Agricultural Experiment Station. Research supported in part by National Science Foundation Grant DEB-75-22427. Edited by W. L. Brown, Jr.

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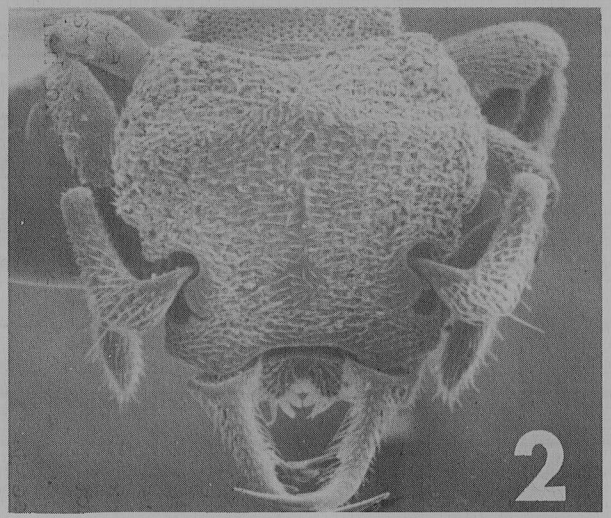

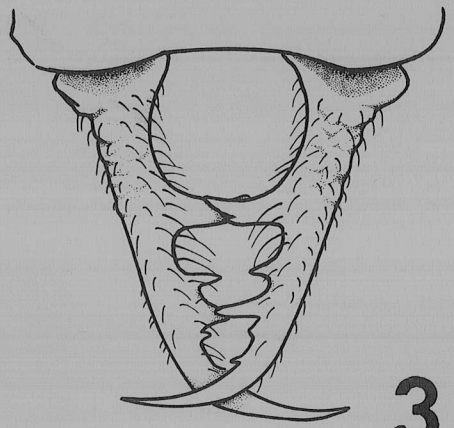

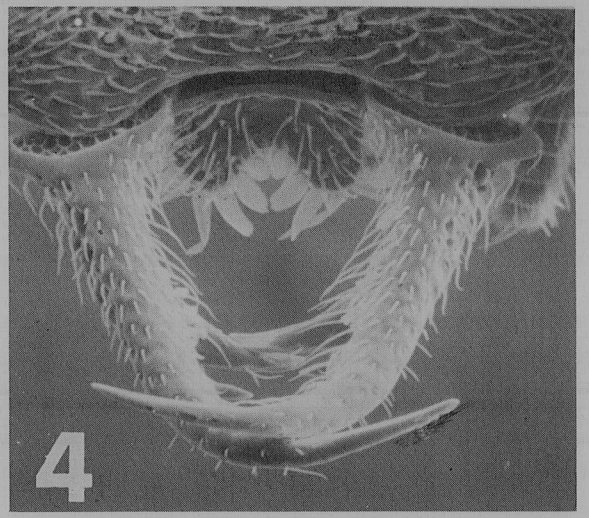

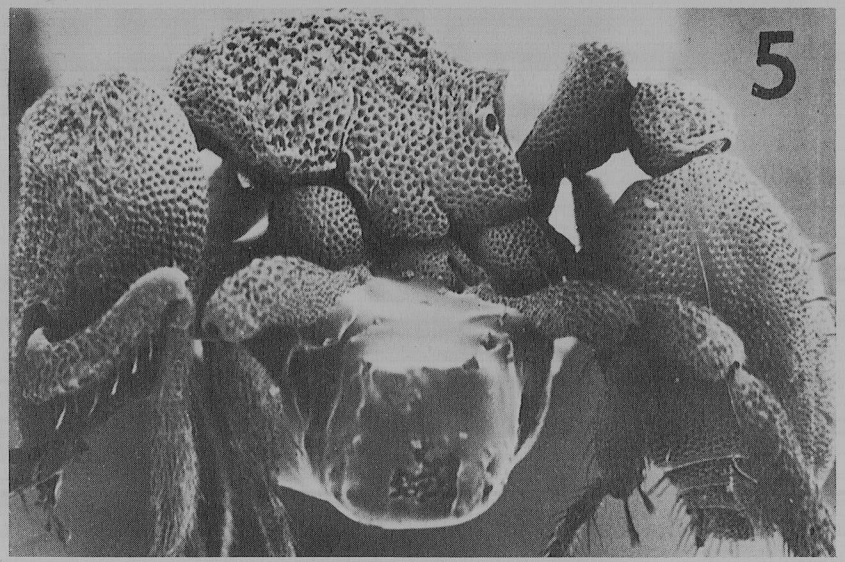

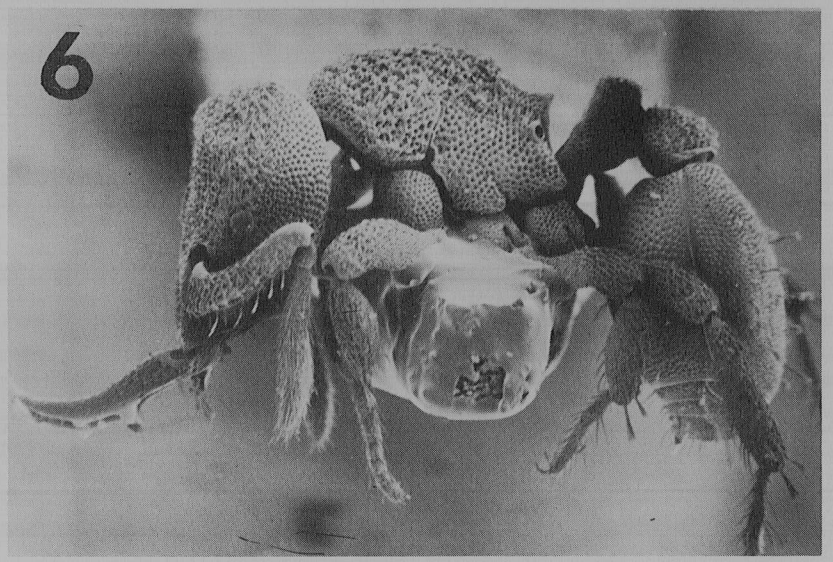

Figs. 2-6, Protalaridris armata sp. n., same paratype worker as shown in Fig. 1 on the reverse side of this card. Fig. 2, full-face dorsal view of head and mandibles. Fig. 3, same, mandibles in dorsal view, drawn from the specimen with head tilted forward to show their full length and dentition. Fig. 4, same, enlargement of front of head in full-face dorsal view to show clypeus, labrum and mandibles. Fig. 5, same, enlargement of side view to show sculpture. Fig. 6, same, side view. SEM photographs by N. F. Johnson and the author; Fig. 3 drawn by Susan Poulakis.

PROTALARIDRIS ARMATA species nov.

Insecta: Hymenoptera: Formicidae: Myrmicinae: Basicerotini

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Worker, holotype: TL 3.2, HL 0.82, HW 0.87 (CI 106), ML (foreshortened on full-face view of head) 0.36 (MI 44), full exposed L of mandible 0.53, eye L 0.06, antennal scape L (bend to apex) 0.48, WL 0.81 mm. (Measurements and indices standard for recent works on ant tribes Basicerotini and Dacetini, e.g., Brown & Kempf, 1960, Studia Ent. (n.s.) 3:167-168).

Paratype workers, 22 specimens from 4 localities in Ecuador and one in Colombia, range downward in size from holotype, the largest specimen seen. Full type series: TL 2.2-3.2, HL 0.56-0.82, HW 0.62-0.87 (CI 105-114), ML (foreshortened) 0.22-0.36 (MI 39-44), eye L 0.03-0.06, antennal scape L 0.32-0.48, WL 0.54-0.81 mm. The smaller specimens often tend to have proportionately wider heads and shorter mandibles, but these allometric differences are slight and not fully constant.

Form of body and mandibles shown in Figs. 1-6 on Card No. 36 and Figs. 7 and 8 on this card. Particularly to be noted are the broad, blunt, transverse temporal ridge, in the form of a broadly open, inverted V, and the median longitudinal carina representing the frontal area, extending back from the middle posterior margin of the clypeus; epistomal (clypeal) suture more distinct than as shown in Fig. 2. Vertex both above and below temporal ridge feebly but broadly impressed on each side. Mandibles (Figs.1-4, 6) strongly upcurved, but the two largest teeth on each preapical margin curving ventromesad to form a sort of cradle as the opposite teeth overlap at full closure. The largest tooth, situated near mandibular midlength, tends to have an unequally bifid apex, very difficult to see unless the mandibles are open. The 3 smaller teeth or denticles are found between the larger teeth, more or less in the positions shown in Fig. 3, and occasionally an additional small denticle occurs on or near the base of one of the larger teeth.

Labrum (Figs. 2, 4) extended in all specimens seen; bilobed, with surface pilosity and special flattened fringing hairs as shown in Fig. 4; sometimes the fringing hairs have longer, attenuated apices. Under-mouthparts not investigated. Antenal scapes flattened, but still rather thick and with convex dorsal surfaces; anterior basal bend slightly expanded, with a subdorsal cultrate margin. Antennomere II (pedicel) campaniform, slightly longer than broad; III-VII short and transverse; VIII slightly longer than broad; IX (apical) about as long as the rest of the funiculus taken together.

When cranium is viewed from the rear, the fine carina separating vertex and back of head more distinct than as shown in Figs. 1 and 7. The antenna issues on each side through a deep semicircular notch in the dorsolateral cephalic margin.

Trunk subpyriform as seen from above, broadest across anterior pronotum; cervix marked off by a blunt, arcuate margin. No sutures evident across the dorsum, except for a shallow, narrow furrow, usually obscured by whitish particulate matter, immediately in front of the carina marking the top of the concave upper part of the propodeal declivity, and presumably indicating the anterior margin of the propodeum. This transverse carina, although often distinct in actual specimens, does not show well at all in Figs. 1 and 7, and is hard to see even in Fig. 5. The low propodeal teeth are well shown in Figs. 5 and 6, and the concave declivity in Fig. 7. Petiole short, with summit transverse in dorsal view, obliquely subtrancate in lateral view (Figs. 5, 6); postpetiole about twice as wide as petiole, rounded above, with a trace of a median longitudinal sulcus posteriad, and a weak median posterior emargination. The greatly dominant first gastric tergum has narrowly rounded sides above its lateral margins forming overhanging margins of a sort, and in length it makes up about 4/5 of the total gaster.

Legs short and compact; femora gradually thickened apicad, and tibiae even thicker, sausage-like; tarsi much more slender, but still not very long; claws long and slender. Underside of petiole biconvex, but without a toothlike process.

Body generally densely punctulate, the punctures small, round, but often deep; legs and scapes finely and densely reticulate-punctulate. Integument opaque, except for dorsal and apical surfaces of mandibles, apicodorsal surface of scape, and the narrow interpunctural spaces of the gaster, which are weakly shining. Dorsum of alitrunk with slightly coarser sculpture,

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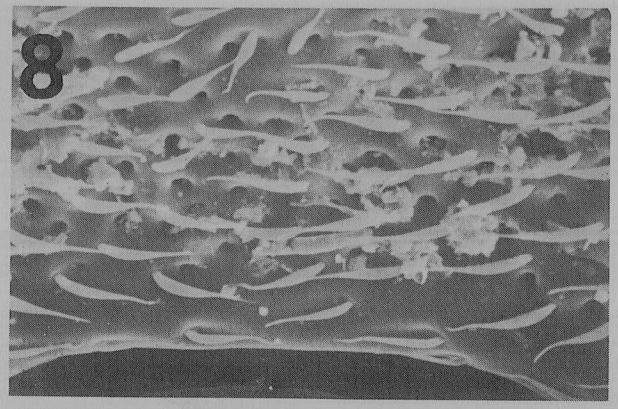

Fig. 7, Protalaridris armata sp. n., worker, same specimen shown on Card No. 36, Figs. 1-6, detail of dorsal view of head and trunk. Fig. 8, same, middle anterior surface of clypeus greatly enlarged to show sculpture and pubescence. Fig. 7 by N. F. Johnson.

consisting of foveolae in which the reclinate hairs are set, separated by very short ridges, mainly oriented in a longitudinal direction. The surface is often fouled and obscured by a whitish, granular substance, chiefly covering parts of the dorsum of head and following tagmata; it may represent a secretion from the ant itself, or else a defensive allomone or hemolymph from the prey.

Larger, specialized hairs stiffly erect, weakly to moderately clavate apicad, their apices rounded, truncate or weakly subfimbriate; it may be that some are secretory setae; limited to: (1) a row of 8 or 9 on the anterior edge of each scape, decreasing in size and spacing toward scape apex; the longest hair is on the cultrate edge of the basal bend and arises slightly dorsal to the rest of the series, and it is tapered apicad and curved gently dorsad, unlike the rest; (2) a group of about 36 on posterior 2/3 of gastric dorsum, arranged in straight or curved transverse rows of 2-6 hairs each, those on the end of the gaster, and about 20 more on the venter, mostly fine and not much enlarged at apex; (3) a pair, one long and one short, at the apex of each tibia (only one on each fore tibia); rather numerous, curved, slightly broadened, decumbent and subdecumbent hairs clothe the tibial apices and the tarsi. Very short, fine, erect hairs are distributed over the undersides of the mandibles and on the funiculi. Appressed and decumbent pubescence mostly pennant-shaped (Fig. 8), abundant on dorsal surfaces and appendages but not hiding surface.

Color dark brown to deep red-brown; appendages-- especially legs-- lighter, reddish-ferruginous. Sting long, tapering from a stout base.

Queen, dealate, 4 km E Santo Domingo, Ecuador: TL 3.6, HL 0.81, HW 0.90 (CI 111), ML (foreshortened) 0.34 (MI 42), ML (exposed) 0.48, eye L 0.15, antennal scape L 0.46, WL 0.96 mm. Resembles worker, but with the usual caste differences. Mesonotum boldly vermiculate-costate in a longitudinal direction; scutellum produced caudad, its posterior margin medially emarginate. Postpetiole with a broad median sulcus. Erect, apically broadened gastric hairs more numerous than in worker, and occurring over the front as well as the rear of tergum.

Holotype (Museum of Comparative Zoology at Harvard University, Cambridge, Massachusetts, USA) one of a series from Ecuador, Pichincha Prov.: 20-30 km ENE Alluriquin on road to Chiriboga, 1400-1800 m, in mossy forest, Sample B-301, S. and J. Peck leg. Paratypes from the same country and province: Tinalandia, 16 km SE Santo Domingo de los Colorados, 680 m, sample B-300; 4 km SE Santo Domingo de los Colorados, 500 m, B-342; 3 km E Tandapi, 1300 m, litter in wet ravine, B-303, all litter-humus berlesates collected by S. and J. Peck. In addition, I have 4 workers from Colombia, Depto. Chocó: Finca Los Guaduales, 10 km SW San José del Palmar on the Rio Torito, litter of Guadua bamboos on hillside at about 800 m, C. Kugler leg.